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ABSTRACT

This study examined new admission policies at the University of Virginia School of Medicine designed to increase the number of students likely to pursue primary care specialities. The study focused on whether there was a relationship between interviewers' predictions and applicants' career choice at the completion of their first year of medical school. Interviewer predictions during admissions interviews were compared to the career choices of two cohorts of applicants who matriculated in 1994 and 1995. For the 1994 cohort, 148 out of 232 interviewer predictions (64 percent) were correct, while for the 1995 cohort, 161 out of 254 predictions (63 percent) were correct. Correlational analysis indicated a low to moderate relationship between the interviewers' predictions and matriculants' career choices. Interviewers tended to make more correct predictions regarding those students not likely to enter primary care. (Contains 10 references.) (MDM)

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An Evaluation of a New Admission Policy Intended to Increase the Number of Primary Care Physicians

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An Evaluation of a New Admission Policy Intended to Increase

the Number of Primary Care Physicians

Background. In an effort to admit more students inclined to select primary care careers, admissions committee interviewers at the University of Virginia (UVa) School of Medicine predicted which applicants would be "most likely" to pursue primary care specialties, with the intent of utilizing these predictions as part of the selection process. The use of these predictions represented a change in the medical school admission process. The purpose of this study was to determine if there was a relationship between the interviewers' predictions and the matriculants' career choice at the completion of their first year of medical school.

Method. Interviewer predictions were compared to the career choices of two cohorts of applicants who matriculated into the UVa School of Medicine in 1994 and 1995. Career choices for each of the two cohorts of matriculants were collected from a career planning survey administered at the end of the first academic year. The overall response rate to the survey was 95% for the 1994 matriculants and 98% for the 1995 matriculants. Cramer's V Correlation Coefficient was utilized to determine relationship between the interviewer prediction variable and the matriculant career choice variable, and the kappa statistic was used to assess the level of interviewer reliability regarding career predictions. Percentages also were reported regarding the accurate match of individual interviewer predictions with the matriculant career choice.

Results and conclusions. The correlations for the two cohorts were as follows: .307 ($p = .01$) for the matriculating class of 1994, and .345 ($p = .01$) for the matriculating class of 1995. The correlation of .307 and .345 indicated a low to moderate relationship between the interviewers' predictions and the matriculants' career choices for each of the two cohorts. The results of this preliminary study, however, must be viewed as a "snapshot" and not as the final comparison between the interviewers' predictions and medical students' choices of a primary care career. This final comparison can only be made when each student formally makes that decision many years from now. The results of this study did provide interviewers valuable data regarding their initial accuracy in predicting matriculants' interest in a primary care career. This feedback cycle enabled interviewers to make a preliminary assessment concerning their career predictions.

An Evaluation of a New Admission Policy Intended to Increase

the Number of Primary Care Physicians

The 1992 report by the Council on Graduate Medical Education (COGME) entitled Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century was a major document outlining our nation's imperative need for an increase in the number of primary care physicians. One of the Council's recommendations to achieve this objective was for medical schools to examine their admissions practices with the goal of admitting more students inclined to select primary care careers [1] (family practice, general internal medicine, and general pediatrics).

The role and possible effects of medical schools' admission policies on increasing the number of primary care physicians have been discussed by a number of writers and researchers. [2-5] A number of studies regarding the identification of applicants most likely to enter a primary care specialty also have been conducted. [6-10] Though the global effects of the admissions process have been investigated, these studies have not examined interviewers' ability to discern between applicants regarding ultimate career choice.

In an effort to admit more students inclined to select primary care careers, admissions committee interviewers at the University of Virginia (UVa) School of Medicine predicted which applicants would be "most likely" to pursue primary care specialties, with the intent of utilizing these predictions as part of the selection process. The use of these predictions represented a change in the medical school admission process, and an evaluation of this new policy was vital in accessing whether the intended impact on primary care career selection was accomplished. The purpose of this study was to determine if there was a relationship between the interviewers' predictions and the students' first choice of career at the completion of their first year of medical school.

Background

The UVa Committee on Admissions interviewed approximately 500 medical school applicants from September 1993 through March 1994 (1993-94 cohort), and approximately 500 applicants from September 1994 through March 1995 (1994-95 cohort). The Admissions Committee had an orientation session immediately preceding each of these two "interviewing seasons" to review interviewing procedures. References to pertinent literature regarding the identification of applicants likely to enter a primary care career were made, but interviewers were not required to read specific articles.

During the "interviewing season," each applicant had two, thirty minute interviews, each with an admissions committee member. During these unstructured interviews, the interviewers sought to evaluate the candidate's motivation for a career in medicine, maturity, social awareness, independence, personal ethics, interpersonal and communication skills, commitment to lifelong learning, compassion, sensitivity, and tolerance. A prediction regarding the likelihood for a career in primary care, academic medicine, or clinical subspecialty also was made. To ensure that the prediction was made, the following question was included on the Interviewer Report Form: "Based on your review of this applicant, which field of medicine do you predict he/she is most likely to enter - (a) primary care/generalist medicine, (b) other clinical specialty, or (c) biomedical research and/or academic medicine?" These predictions were considered later when selecting those offered admission.

Method

The interview predictions for each of the 1994 matriculants (1993-94 cohort) and 1995 matriculants (1994-95 cohort) were received in a report prepared by the admissions director. Interviewers were coded to ensure that they remained anonymous.

The career choices for each of the two cohorts of students who had completed their first year were collected from a survey. The survey was constructed to yield data regarding the students' top three career choices and their degree of certainty about each choice. A pilot test of the survey was conducted to enhance the validity of the instrument. The overall response was a 95% return rate for the 1994 matriculants, and a 98% return rate for the 1995 matriculants.

Both the interviewer prediction variable and the student first career choice variable were dichotomized. Therefore, Cramer's V Correlation Coefficient was utilized to answer the research question. An alpha level of .05 was set for the significance level.

The kappa statistic was used to assess the level of interviewer reliability regarding career predictions. Two interviewers for each applicant, and the use of categorical data, made this a reasonable approach to evaluate interviewer agreement.

Comparisons of individual interviewer's predictions with the first choice of career for the students they interviewed also were reported in terms of frequencies.

Results

A correlation of .307 ($p = .01$) was obtained for the interviewers' predictions and the 1994 matriculants' first choices of career, and a correlation of .345 ($p = .01$) was obtained for the interviewers' predictions and the 1995 matriculants' first choices of career. Both correlation coefficients indicated a low to moderate strength of relationship between the two variables.

A kappa statistic of .449 was obtained for the 1993-94 cohort interviewer predictions, and .647 was obtained for the 1994-95 cohort interviewer predictions. The .449 statistic indicated a moderate strength of agreement, and the .647 indicated a substantial strength of agreement, as interpreted by the scale suggested by Landis and Koch (Landis and Koch; 1977).

For the 1994 matriculants, there were 232 predictions made by 26 interviewers for 116 students. Each student had two separate interviews, and each interviewer made a prediction

relative to the student's interest in a primary care career (Table 1). Deferred students who did not have interviewer predictions and students who did not return their surveys were excluded from the study.

Table 1

1994 Matriculants

Interviewers' Predictions Relative to Matriculants' Career Choice

	Matriculants' Choice Generalist	Matriculants' Choice NonGeneralist
Interviewer Prediction Generalist	• 76 (56%)	60 (44%)
Interviewer Prediction NonGeneralist	24 (25%)	• 72 (75%)

• Correct predictions

Of these 232 predictions, 148 (64%) were correct and 84 (36%) were incorrect relative to the first choice of career given by the 116 students on their surveys. Further, 136 (59%) of these 232 predictions were "most likely" predictions that the students interviewed would enter a primary care career. The remaining 96 (41%) were predictions that the students interviewed would not likely enter a generalist career.

Of the 136 "most likely to enter a primary care career" predictions, 76 (56%) were correct and 60 (44%) were incorrect relative to the first choice of career given by the 116 students. Regarding

the 96 "not likely to enter primary care" predictions, 72 (75%) were correct and 24 (25%) were incorrect relative to the first choice of career.

For the 1995 matriculants, there were 254 predictions made by 29 interviewers for 127 students. Of these 254 predictions, 161 (63%) were correct and 93 (37%) were incorrect relative to the first choice of career given by the 127 students on their surveys (Table 2). Students who did not have interviewer predictions or who did not return their surveys were excluded from the study.

Table 2

1995 Matriculants

Interviewers' Predictions Relative to Matriculants' Career Choice

	Matriculants' Choice Generalist	Matriculants' Choice NonGeneralist
Interviewer Prediction Generalist	* 82 (52%)	77 (48%)
Interviewer Prediction NonGeneralist	16 (17%)	* 79 (83%)

* Correct predictions

Examining these 254 predictions, 159 (63%) were "most likely" predictions that the students interviewed would enter a primary care career. The remaining 95 (37%) were predictions that the students interviewed would not likely enter a generalist career.

Of the 159 "most likely to enter a primary care career" predictions, 82 (52%) were correct and 77 (48%) were incorrect relative to the first choice of career. For the 95 "not likely to enter

primary care" predictions, 79 (83%) were correct and 16 (17%) were incorrect relative to the first choice of career given on the survey.

Conclusion

The purpose of this study was to determine if there was a relationship between the interviewers' predictions and the students' first choice of career at the completion of their first year of medical school. The correlation of .307 and .345 indicated a low to moderate relationship between the interviewers' predictions and the matriculants' career choices for each of the two cohorts. Results of this study, however, must be viewed as a "snapshot" and not as the final comparison between the interviewers' predictions and medical students' choices of a primary care career.

The results of this study provided interviewers individual data regarding their initial accuracy in predicting matriculants' interest in a primary care career. This feedback cycle enabled interviewers to make a preliminary assessment concerning their career predictions.

It was interesting to note that the interviewers tended to make more correct predictions regarding those students likely not to enter a primary care career. This might indicate that interviewers were more astute regarding the identification of applicants more likely to enter a specialist career than those likely to enter a primary care career.

This study was part of a longitudinal, career tracking study that traces changes in medical students' career choices toward primary care specialties from entry through the end of medical school. Data collected in this longitudinal study should provide insights in the career selection process that might be useful in training interviewers to make career predictions.

In summary, this study provided a foundation for the longitudinal study described above, and can serve as a model for other schools that are implementing and evaluating new admission policies designed to increase the number of primary care physicians.

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References

1. Council on Graduate Medical Education. *Improving access to health care through physician workforce reform: directions for the twenty-first century*. Washington, D.C.: Government Printing Office, 1992.
2. Rabinowitz, H.K. Estimating the percentage of primary care rural physicians produced by regular and special admissions policies. *J. Med. Educ.* **61** (1986):598-600.
3. Colwill, J.M. Where have all the primary care applicants gone? *N. Engl. J. Med.* **326** (1992): 387-393.
4. Barnhart, J., Shekelle, P., and Lewis, C. The effect of a medical school's admission and curriculum policies on increasing the number of physicians in primary care specialties. *Acad. Med.* **71** (1996): 293-295.
5. Bland, C.J., Meurer, L.N., Maldonado, G. Determinants of primary care specialty choice: a non-statistical meta-analysis of the literature. *Acad. Med.* **70** (1995):620-641.
6. Fadem, B.H., et al. Predicting medical specialty choice: a model based on students' records. *J. Med. Educ.* **59** (1984):407-415.
7. Dial, T.H., Lindley, D.W. Predictive validity of specialty choice data from AAMC graduation questionnaire. *J. Med. Educ.* **62** (1987):955-958.
8. Babbott, D., et al. Trends in evolution of specialty choice. Comparison of US medical school graduates in 1983 and 1987. *JAMA* **261** (1989):2367-73.
9. Kassler, W.J, Wortman, S.A, Silliman, R.A. Why medical students choose primary care careers. *Acad Med.* **66** (1991):41-43.
10. Schneider, F.D., Hosokawa, M.C., Campbell, J.D. Medical school application essays and specialty choice. *Fam. Med.* **26** (1994):509-512